South African Journal of Science

Suid-Afrikaanse Tydskrif vir Wetenskap

Volume 86

1990

Index

Index to Parts

No. 1 January	1–56
No. 2 February	5–112
No. 3 March	113–168
No. 4 April	169–212
No. 5/6 May/June	213–276
No. 7/8/9/10 July–October	277–472
No. 11/12 November/December	473–552

Supplement to the South African Journal of Science, October 1991

A

Acacia. Immunology and phylogeny II: further studies on *Acacia* ... 599
Afrikaans. From text to speech in Afrikaans – by computer ... 2
ALEXANDER, J.J., *et al.* ... 515
Amino acids. The measurement and interpretation of amino acid responses in growing animals ... 178
Amoebic liver abscess. Cell-mediated immunity to *Entamoeba histolytica* in amoebic liver abscess patients ... 139
Anatomical Society of Southern Africa: selected abstracts of papers presented at the 20th annual congress, Bloemfontein, April 1990 ... 159
Anatomiese Vereniging van Suidelike Afrika: gekeurde abstrakte van referate gelewer gedurende die jaarlikse kongres, Bloemfontein, April 1990 ... 159
ANDERSEN, N.J.B. ... 476
ANDERSEN, N.J.B. and ANDREOLI, M.A.G. ... 499
Animal-based research. Procedures for the control of the care and use of animals for teaching and research at the University of the Witwatersrand ... 69
Anomodontia. A new anamodont therapsid from South Africa and its bearing on the ancestry of *Dicynodontia* ... 43
ARCHER, C.B., *et al.* ... 419
Atmosphere. Change in nature and the nature of change: Interactions between terrestrial ecosystems and the atmosphere ... 350
AVENANT, J., *et al.* ... 28
AVERY, D.M. ... 407
AVERY, D.M., *et al.* ... 302

B

Baboons. Experimental malignant mesothelioma in baboons ... 89
Baboons. Gingival temperatures in the baboon and vervet monkey ... 86
BALL, J.M., *et al.* ... 434
Barakwena population. Polymorphism in sparteine oxidation in the Barakwena (Kwengo) of southern Africa ... 28
BARBOUR, A.H., *et al.* ... 294
BARKER, M.D., *et al.* ... 279
BARR, G.D., *et al.* ... 462
BASSON, B. and GALPIN, J.S. ... 458
BASSON, K., *et al.* ... 199
BAYNES, R.D., *et al.* ... 142
Beach pollution. Plastic and other artefacts on South African beaches: temporal trends in abundance and composition ... 450
BEAUMONT, P.B. and LEE-THORP, J.A. ... 452
BECKER, P., *et al.* ... 493
Bedbug control. The effect of bedbug control on malaria control operations ... 211
Bedbugs. Interspecific hybridization in bedbugs supports the Recognition Concept of species ... 121
Bedbugs. Interspecific mating in bedbugs does not support the Recognition Concept of species: Comments on Ferguson ... 176
BERS, N.L. VAN See VAN BERS, N.L. ...
Beta-bronze. Metallurgy on the rails ... 3
BILJON, P.L. VAN See VAN BILJON, P.L. ...
Biocontrol. Prospects for the biological control of triffid weed, *Chromolaena odorata*, in southern Africa ... 229
BISHOP, N.T., *et al.* ... 64
Black rhinoceros. The case for dehorning the black rhinoceros in Namibia ... 226
Blood. Relationship between lead in air and in the blood and hair of rats ... 156
Blue antelope. Did the last blue antelope *Hippotragus leucophaeus* die in the eastern Orange Free State, South Africa? ... 477
BODEKER, G., *et al.* ... 279
BOND, W.J. and RICHARDSON, D.M. ... 429
BONGANIMAYOSI and BOTHA, J. ... 270
BOS, P., *et al.* ... 515
BOTES, P.J., *et al.* ... 152
BOTHA, G.A., *et al.* ... 302
BOTHA, J. and BONGANIMAYOSI ... 270
BOTHWELL, T.H., *et al.* ... 142
Bradycardia. A conceptual model for defining 'bradycardia' during apnea in man ... 484
BRAIN, P. ... 195
BRINK, A.B.A., *et al.* ... 434
BRINK, J.S., *et al.* ... 302
BROTHERS, D.J. and NEWBERRY, K. ... 4, 176
BRUINTJES, R.T., *et al.* ... 419
Brunus edwardii. The earliest recorded occurrence of *Brunus edwardii* (Roosevelt) Blackmore *et al.* in the Makapansgat Cave of Hearths deposits ... 174
Bryophytes. Detection of prostaglandin $F_{2\alpha}$ by radio-immunoassay in three South African bryophytes and its relation to the occurrence of polyunsaturated fatty acids ... 152
BUTKOW, N., *et al.* ... 24

C

Cainozoic. Cainozoic environmental changes in southern Africa ... 315
CAMPBELL, G.K., *et al.* ... 256
Cancer inhibition. Spectrophotometric evidence for Pt–Pt interaction in new cancer-inhibiting compounds from the class of (1,2-diphenyl ethylene diamine) dichloroplatinum(II) complexes ... 518
Cape Flats. A report on drilling and trenching on the Woltemade Flats, Cape Town, in 1988 and 1989 ... 487
Cape honeybee. Defining the Cape honeybee: reproductive traits of queenless workers ... 524
CAR, H.G., *et al.* ... 142
Cardiac muscle. Inositol phosphates and calcium release from sarcoplasmic reticulum of cardiac muscle ... 512
Carbenoxolone. The effect of carbenoxolone on rat uterine contractility ... 270
CARSTENS, M.E., *et al.* ... 265
CEBEKHULU, S.Q., *et al.* ... 211
Cell-mediated immunity. Cell-mediated immunity to *Entamoeba histolytica* in amoebic liver abscess patients ... 139
CHOWN, S.L. ... 386
CHRISTIE, A.D.M. ... 9
Chromolaena odorata. Prospects for the biological control of triffid weed, *Chromolaena odorata*, in southern Africa ... 229
Cisplatin. Spectrophotometric evidence for Pt-Pt interaction in new cancer-inhibiting compounds from the class of (1,2-diphenylethylene diamine) dichloroplatinum(II) complexes ... 518
CLARK, J. TAUNTON- See TAUTON-CLARK, J. ...
CLARKE, C.J.S., *et al.* ... 64
CLEATON-JONES, P., *et al.* ... 86
Climatic change. Climate change and hydrological response in southern Africa: heading towards the future ... 373
Climatic change. Late Pleistocene and Holocene climatic change in southern Africa ... 302
Climatic change. Mechanisms of climatic change: a review ... 340

Climatic change. Modelling climatic change in southern Africa: a review of available methods ... 318
CLOETE, T.E. and NEL, L.H. ... 19
Coastal dunefields. Environmental history and dating of coastal dunefields ... 311
Coastal dunes. Coastal dunes as indications of environmental change ... 299
Coastal rock gullies. On long-period sea surface oscillations within coastal rock gullies ... 489
Coastal structural geology. The structural evolution of the coastal area between Danger Point and Struisbaai in the southern Cape Fold Belt, with implications for the siting of a nuclear power station ... 499
Coastal surveys. Early coastal surveys ... 235
COETZEE, F.S.J. and GOLDSTEIN, B. ... 89
COLOAHAN, B.D. ... 477
COMPTON, S.G. ... 39
Computer graphics. Use of computer graphics software to produce a three-dimensional morphological and bathymetric model of a Zululand coral reef ... 130
Computer software. New delights in computer software ... 187
Computerized medicine identification program. Computerized tablet and capsule identification ... 214
Conference on Geosphere-Biosphere change in southern African, Cape Town, December 1989: selected papers ... 278
COOPPAN, R.M., *et al.* ... 493
COOREMANS, B. and SCOTT, L. ... 156
COOVADIA, H.M., *et al.* ... 139, 493
Corrosion. EDS and SIMS analysis of grain boundary precipitates in Fe-40Cr alloys responsible for reduced corrosion resistance ... 205
CORTIE, M.D., *et al.* ... 205
Council for Scientific and Industrial Research. See CSIR ...
COWARD, P., *et al.* ... 493
COWLING, R.M. ... 462
COWLING, R.M. and HOFFMAN, M.T. ... 286
COWLING, R.M., *et al.* ... 118
CRAWFORD, R.J.M., *et al.* ... 281, 330
CREWE, R.M. and HEPBURN, H.R. ... 524
Crop production. Effects of global warming on crop production in South Africa ... 306
CSIR. Technology impact: from aeronautics to zinc refining ... 474
CSIR. The CSIR in review ... 58
Culture media. Comparison of the performance of South African and imported microbiological culture media ... 19
Cycads. A conservation strategy for the South African cycads ... 220
Cynictis penicillata. Genic variation in the yellow mongoose *(Cynictis penicillata)* in southern Africa ... 256

D

d'INVERNO, R.A., *et al.* ... 64
Dassen Island. Phosphatic sand removal from Dassen Island: effect on penguin breeding and guano harvests ... 172
Data analysis. Some aspects of analysing irregularly spaced time dependent data ... 458
DAUTH, J., *et al.* ... 192
DE STADLER, L.G. ... 2
DE WET, C. ... 440
DE WET, H., *et al.* ... 152
DE WIT, M.J. ... 479
DEACON, J., *et al.* ... 302
DEAN, W.R.J. and MILTON, S.J. ... 207, 231
DEIGNAN, M.T., *et al.* ... 118
DEMETRIADES, N., *et al.* ... 252
DENHOLM, I., *et al.* ... 41
DENNILL, G.B. and MORAN, V.C. ... 116
DENT, D.M., *et al.* ... 45
Development schemes. The socio-ecological impact of development scheme in the 'homelands' of South Africa ... 440
DIAB, R.D., *et al.* ... 279
Diamond physics. Diamond devices in electronics: new impetus to an old dream ... 485
Dicynodontia. A new anomodont therapsid from South Africa and its bearing on the ancestry of *Dicynodontia* ... 43
DREYER, M.J., *et al.* ... 192
Drought. Assessment of impacts associated with drier or warmer scenarios ... 447
DU PISANI, A.L. and PARTRIDGE, T.C. ... 306
Dunefields. Environmental history and dating of coastal dunefields ... 311
DYK, VAN D. See VAN DYK, D. ...

E

Earth mounds. Mima-like mounds in the southern and western Cape: are the origins so mysterious? ... 207
Education. A post-secondary year of technological and scientific education ... 234
EGAN, T.J., *et al.* ... 21
Electrical pacing. Effect of electrical pacing and external calcium concentration on the contractile performance of the isolated perfused rat heart ... 24
Elephant bone. Carbon and nitrogen isotopes in elephants ... 147
Elephant ivory. Structure and composition of ivory of the African elephant *(Loxodonta africana)* ... 192
ELOFF, J.H.P. ... 124
Embryo transfer. Embryo transfer a possible aid to conservation .. 3
Entamoeba histolytica. Cell mediated immunity to *Entamoeba histolytica* in amoebic liver abscess patients ... 139
Environmental change. Cainozoic environmental changes in southern Africa ... 315
Environmental change. Environmental changes reflected by pollen in some Holocene sediments from Transvaal, South Africa and Marion Island, southern Ocean ... 464
Environmental change. Environmental shifts in the last 20 000 years: isotopic evidence from Equus Cave ... 452
Environmental public policy. The evolution of public policy with regard to the environment: a legal perspective over the last fifty years ... 413
Enzymes. Biomolecular manpower ... 224
Equus Cave. Environmental shifts in the last 20 000 years: isotopic evidence from Equus Cave ... 452
ERASMUS, B.H., *et al.* ... 256
Estuaries. Historical changes and sedimentary characterictics of southern African estuaries ... 425
Eutrophic waters. Treatment of eutrophic waters in South Africa ... 6
EYRE, D. and LAURIE, D.P. ... 263

F

Fasting. Effects of fasting on plasma melatonin levels ... 145
FATTI, L.P. and MEYER, D.H. ... 354
FERGUSON, J.W.H. ... 121
FERREIRA, H.C. ... 75

Ferritic stainless steels. EDS and SIMS analysis of grain boundary precipitates in Fe-40Cr alloys responsible for reduced corrosion resistance 205
Ferritin. Hepatic and splenic synthesis of ferritin and B-actin in inflammation 142
FEY, M.V., *et al.* 403
FIELDING, P.J., *et al.* 252
Fig wasps. A collapse of host specificity in some African fig wasps 39
Fire hazards. Fire hazards revealed 3
Fisheries. Scenarios for global-warming induced change in the open-ocean environment and selected fisheries of the west coast of southern Africa 281
Fisiologiese Vereniging van Suider Afrika: opsommings van referate gelewer gedurende die jaarlikse kongres, Seepunt, April 1988 97
Fisiologie Vereniging van Suider Afrika: opsommings van referate van die jaarlikse kongres, Gordonsbaai, September 1990 528
FORBES, A.T., *et al.* 252
Forest pathology. Current status and future prospects of forest pathology in South Africa 60
FRITZ, V.U. 79
FUGGLE, R.F., *et al.* 294

G

GALPIN, J.S. and BASSON, B. 458
Gearbox corrosion. Gearing up to make the waters flow 170
GEE, Q. 187
GELDENHUIS, S.J.J., *et al.* 434
Geological environment. The changing impact of urbanization and mining on the geological environment 434
GILLILAND, M.G. and VAN STADEN, J. 132, 135
Gingival temperatures. Gingival temperatures in the baboon and vervet monkey 86
GLASSER, D. 234
GLAZEWSKI, J.I. and RABIE, M.A. 413
GLAZEWSKI, J.I., *et al.* 294
Global change. Studies of global change in southern Africa 278
Global warming. Effects of global warming on crop production in South Africa 306
Global-warming. Scenarios for global-warming induced change in the open-ocean environment and selected fisheries of the west coast of southern Africa 281
GOLDSTEIN, B. and COETZEE, F.S.J. 89
Gondwana. Gondwana research: new breakthrough, old super-continent 479
GONSALVES, J.W. 489
GOUS, R.M. 178
Gousiekte. Non-pathological bacterial symbiosis in *Pachystigma* and *Fadogia* (Rubiaceae): its evolutionary significance and possible involvement in the aetiology of gousiekte in domestic ruminants 93
GRANT, M.R. 63
Graph theory. What graphs are these? 190
GREENWOOD, P.H., *et al.* 236
GROBLER, S.R., *et al.* 156
GROENEWALD, E.G., *et al.* 152
Guano harvest. Phosphatic sand removal from Dassen Island: effect on penguin breeding and guano harvests 172
Guayule. Recent research in South Africa on rubber production in guayule: I. Biosynthesis and associated topics 132
Guayule. Recent research in South Africa on rubber production in guayule: II. Seed production and establishment 135
Gummiferae. Immunology and phylogeny II: further studies on *Acacia* 195

H

Hair. Relationship between lead in air and in the blood and hair of rats 156
HALL-MARTIN, A.J., *et al.* 147
HANVEY, P.M. and LEWIS, C.A. 271
Harvester termite. Bird and mammal predators of the harvester termite *Hodotermes mossambicus* (Hagen) in semi-arid regions of South Africa 34
Harvester termite. The dry matter, energy and nitrogen budget of the harvester termite *Hodotermes mossambicus* (Hagen) 30
Harvester termite. Utilization of dry redgrass *Themeda triandra* (Forsk.) by the harvester termite *Hodotermes mossambicus* (Hagen) 37
HARVEY, B.H., *et al.* 265
Heart attack. Stroke and heart attack: one disease or two? 79
Heart contractile performance. Effect of electrical pacing and external calcium concentration on the contractile performance of the isolated perfused rat heart 24
HEDGEHOG AND THE FOX 78, 129, 194, 237, 478
HENRY, J.L., *et al.* 454
HENSCHEL, J.R. 151
HEPBURN, H.R. and CREWE, R.M. 524
HERBERT. R.S., *et al.* 302
Herbivorous insects. The possible role of directed mobility in the recruitment onto novel plant species and host plant specificity of herbivorous insects and mites 116
HERRERO, C.A. VILLACASTIN- See VILLACASTIN-HERRERO, C.A. .....
Heuweltjies. Mima-like mounds in the southern and western Cape: are the origins so mysterious? 207
HEWITT, P.H. and KOK, O.B. 34
HEWITT, P.H. and VAN BILJON, P.L. 37
HICKMAN, R. *et al.* 45
Hippotragus leucophaeus. Did the last blue antelope *Hippotragus leucophaeus* die in the eastern Orange Free State, South Africa? 477
HOBSON, C.G., *et al.* 392
Hodotermes mossambicus. Bird and mammal predators of the harvester termite *Hodotermes mossambicus* (Hagen) in semi-arid regions of South Africa 34
Hodotermes mossambicus. The dry matter, energy and nitrogen budget of the harvester termite *Hodotermes mossambicus* (Hagen) 30
Hodotermes mossambicus. Utilization of dry redgrass *Themeda triandra* (Forsk.) by the harvester termite *Hodotermes mossambicus* (Hagen) 37
HOFFMAN, M.T. and COWLING, R.M. 286
HOFFMAN, M.T. *et al.* 392, 462
Holocene. Environmental changes reflected by pollen in some Holocene sediments from Transvaal, South Africa and Marion Island, Southern Ocean 464
Holocene. Holocene climatic change in southern Africa: the contribution of micromammals to its study 407
Holocene. Late Pleistocene and Holocene climatic change in southern Africa 302
HOPSON, J.A. and RUBIDGE, B.S. 43

House-fly. Genetic basis of sex determination in two South African strains of house-fly (*Musca domestica* L.) 41
HUTCHINGS, L. and TAUNTON-CLARK, J. 467
Hybridization. Interspecific hybridization in bedbugs supports the Recognition Concept of species 121

I

ILLENBERGER, W.K. and VERHAGEN, B. Th. 311
Immunoglobulins. A micro-enzyme-immunoassay for the determination of thrombocyte-associated immunoglobulins in malaria patients 209
Immunoregulatory changes. Immunoregulatory changes in single and combined, mild to moderate schistosomal infections in black children living in the Durban area 493
Inflammation. Hepatic and splenic synthesis of ferritin and B-actin in inflammation 142
Information transmission. Of codes, combinatorics and information theory: the input restricted communications channel 75
Inositol phosphates. Inositol phosphates and calcium release from sarcoplasmic reticulum of cardiac muscle 512
Insect communities. Possible effects of Quaternary climatic change on the composition of insect communities of the South Indian Ocean Province Islands 386
Interspecific mating. Interspecific mating in bedbugs does not support the Recognition Concept of species: Comments on Ferguson 176
Intracellular magnesium. A modified technique for the measurement of intracellular magnesium in clinical laboratories 523
Ion exchange. Ion exchange cleans up its act 483
Irregular data. Some aspects of analysing irregularly spaced time dependent data 458
Ivory. Structure and composition of ivory of the African elephant *(Loxodonta africana)* 192

J

JASKIEWICZ, K., *et al.* 45
JONES, P. CLEATON- See CLEATON-JONES, P. 246

K

Karoo. Seed production in rangelands of the southern Karoo 231
Karoo. Vegetation change in the semi-arid eastern Karoo over the last 200 years: an expanding Karoo — fact or fiction? 286
Karoo. Vegetation dynamics in the semi-arid eastern Karoo, South Africa: the effect of seasonal rainfall and competition on grass and shrub basal cover 462
KIEPIELA, P., *et al.* 139, 493
KING, L.M., *et al.* 24
KLUGE, R.L. 229
KOJIMA, M. 17
KOK, O.B. and HEWITT, P.H. 34
KOK, P.D.F., *et al.* 93
KOTZE, D. *et al.* 156
KROHN, R.G., *et al.* 281
KRUGER, G.H.J., *et al.* 152

L

LAING, M. 216
Lake St Lucia. Prawns, salinities and lake levels in St Lucia, northern Natal 252
LAPINSKY, S.E., *et al.* 142
Late Pleistocene. Late Pleistocene and Holocene climatic change in southern Africa 302
Late Quaternary. A southern African Late Quaternary sea-level curve 456
Late Quaternary. Late Quaternary pollen from a hot spring in the upper Orange River Basin, South Africa 154
LAURIE, D.P. and EYRE, D. 263
Lead pollution. Relationship between lead in air and in the blood and hair of rats 156
LEE-THORP, J.A. and BEAUMONT, P.B. 452
Leopard population. How many leopards? A criticism of Martin and de Meulenaer's population estimates for Africa 218
LEWIS, C.A. and HANVEY, P.M. 271
LINDEQUE, M. 226
LINDESAY, J.A. 340
Lithium. Antagonism of a novel cholinotropic property of lithium by scopolamine: a cyclic GMP hypothesis 265
LOCHNER, A. and MOUTON, R. 512
LOUW, A.I., *et al* 209
Low-alloy steel. Metallurgy on the rails 2
LUTJEHARMS, J.R.E., *et al.* 356

M

McGIBBON, S., *et al.* 454
McGREGOR, A. 523
McLEOD, H., *et al.* 45
Makapansgat. The earliest recorded occurence of *Brunus edwardii* (Roosevelt) Blackmore *et al.* in the Makapansgat Cave of Hearths deposits 174
Malaria. A micro-enzyme-immunoassay for the determination of thrombocyte-associated immunoglobulins in malaria patients 209
Malaria control. The effect of bedbug control on malaria control operations 211
MALL, A., *et al.* 45
MANCHESTER, K.L. 521
MANDER, J., *et al.* 252
MANLEY, L. and SCOTT, P.A. 484
MANSON, A,D., *et al.* 403
Marine biota. Environmental influences on marine biota off southern Africa 330
Marine environment. Causative mechanisms for intra-annual and interannual variability in the marine environment around southern Africa 356
MARQUES, H.M., *et al.* 21
MARTIN, A.J. HALL- See HALL-MARTIN, A.J. ....
MASON, S.J. 243
MASTERS, J.C. and RAYNER, R.J. 174
Mathematics. The power and beauty of mathematics 238
MAUD, R.R., *et al.* 302
MCHUNU, Z.M., *et al.* 211
Melatonin levels. Effects of fasting on plasma melatonin levels 145
MERWE, C.F. VAN DER See VAN DER MERWE, C.F. ....
Mesothelioma. Experimental malignant mesothelioma in baboons 89
Meteorological data. Methods of space-time analysis applied to meteorological data 354
MEYER, B.J., *et al.* 145
MEYER, D.H. and FATTI, L.P. 354
MICHIE, C.A., *et al.* 493
Microelectronic devices. Chips with everything 114
Micromammals. Holocene climatic change in southern Africa: the contribution of micromammals to its study 407
Microsymbiont–host specificity. Does microsymbiont–host specificity determine plant species turnover and speciation in Gondwanan shrublands? A hypothesis 118

MIDGLEY, D.C., *et al.* 434
MILLER, D.E. 456
MILTON, S.J. and DEAN, W.R.J. 207, 231
MITCHELL, D. 235
MITCHELL, G. 69
Mites. The possible role of directed mobility in the recruitment onto novel plant species and host plant specificity of herbivorous insects and mites 116
Mollusces. Terrestrial molluscs and archaeological stratigraphy: a cautionary tale 204
MOLONEY, C.L. and RYAN, P.G. 450
MONCRIEFF, J., *et al.* 28, 145
Mongoose. Genic variation in the yellow mongoose *(Cynictis penicillata)* in southern Africa 256
MONTEIRO, P.M.S., *et al.* 454
MORAN, V.C. and DENNILL, G.B. 116
MOUTON, R. and LOCHNER, A. 512
Mucin. Putative glycosylated 'linker' protein in mucin in gastric carcinoma 45
Musca domestica L. Genetic basis of sex determination in two South African strains of house-fly (*Musca domestica* L.) 41
Myeloperoxidase. The oxyferrous adduct of myeloperoxidase (compound III) and its reactivity with chloride 199

N

NEL, L.H. and CLOETE, T.E. 19
NELSON, G., *et al.* 356
NEWBERRY, K. and BROTHERS, D.J. 4, 176
NEWBERRY, K., *et al.* 211
NORTON, P. 218
Nuclear power siting. The structural evolution of the coastal area between Danger Point and Struisbaai in the southern Cape Fold Belt, with implications for the siting of a nuclear power station 499
Nuclear site selection. Geological techniques used in the siting of South Africa's nuclear facilities 476
Numerical relativity. Numerical relativity: the characteristic initial value problem on a transputer array 64

O

O'SULLIVAN, B. 487
Oceanographic variability. The effect of oceanographic variability on South African weather and climate 382
OELLERMANN, O.R. 190
OFFRINGA, G. 6
Oil shales. Origin, classification and utilization of oil shales in South Africa 9
OSBORNE, R. 220
Ozone. Daily and seasonal variations in the atmospheric ozone over Pretoria between April 1964 and February 1972 419
Ozone. Ozone: the South African connection 279

P

PALLETT, J., *et al.* 256
PALMER, A.R., *et al.* 392
Parasitological Society of Southern Africa: abstracts of papers presented at the annual scientific meeting, Johannesburg, June 1989 47
Parasitologiese Vereniging van Suidelike Afrika: uittreksels van referate van die jaarlikse wetenskaplike vergadering, Johannesburg, Junie 1989 47
PARTRIDGE, T.C. 315
PARTRIDGE, T.C. and DU PISANI, A.L. 306
PARTRIDGE, T.C., *et al.* 302, 434
PATTRICK, G., *et al.* 21
PAYNE, A.I.L., *et al.* 281
Pebble orientations. Pebbles on a sandy beach: a comparison of swash and wind as agents producing distinctive pebble orientations 65
Pedosphere. Acidification of the pedosphere 403
Phosphatic sand. Phosphatic sand removal from Dassen Island: effect on penguin breeding and guano harvests 172
Physiology Society of Southern Africa: abstracts of papers from the annual congress, Gordon's Bay, September 1990 528
Physiological Society of Southern Africa: abstracts of papers presented at the annual congress, Sea Point, April 1988 97
PISANI, A.L. DU See DU PISANI, A.L. ....
Plant speciation. Does microsymbiont-host specificity determine plant species turnover and speciation in Gondwanan shrublands? A hypothesis 118
Plastic debris. Plastic and other artefacts on South African beaches: temporal trends in abundunce and composition 350
Plate tectonics. Gondwana research: new breakthrough, old supercontinent 479
PLUG, I. 204
Pollen. Late Quaternary pollen from a hot spring in the Orange River Basin, South Africa 154
POLLOCK, D.E., *et al.* 281
Pollution control. Microorganisms light the way in pollution control 214
Poultry. Amino acid responses in broilers 59
Poultry. The measurement and interpretation of amino acid responses in growing animals 178
PRINS, J.F. 485
Prostaglandins. Detection of prostaglandin $F_{2\alpha}$ by radioimmunoassay in three South African bryophytes and its relation to the occurence of polyunsaturated fatty acids 152
Protein synthesis. Analysis of control of protein synthesis initiation by use of the computer program METAMOD 521
Pyrophosphate. The non-reductive removal of iron from human serum N-terminal monoferric transferrin by pyrophosphate 21

Q

Quaternary. Possible effects of Quaternary climatic change on the composition of insect communities of the South Indian Ocean Province Islands 386
Quaternary lacustrine deposits. A preliminary report on the age and significance of Quaternary lacustrine deposits at Birnam, north-east Cape Province, South Africa 271

R

RABIE, M.A. and GLAZEWSKI, J.I. 413
RABINER, E.A. *et al.* 24
Rainfall. Temporal variability of sea surface temperatures around southern Africa: a possible forcing mechanism for the 18-year rainfall oscillation? 243
RAMM, A.E.L. and SCHLEYER, M. 228
RAMPITSCH, C. 224
RAMSAY, P.J. 130
RANDALL, R.M. and ROSS, G.J.B. 172
Rational basis. A rational basis for stiff problems 263
RAUBENHEIMER, E.J., *et al.* 192
RAYNER, R.J. and MASTERS, J.C. 174
Recognition Concept. Interspecific hybridization in bedbugs supports the Recognition Concept of species 121

Recognition Concept. Interspecific mating in bedbugs does not support the Recognition Concept of species: Comments on Ferguson 176
Recognition Concept. Problems in the Recognition Concept of species: an example from the field 4
REDDERING, J.S.V. and RUST, I.C. 425
Redgrass. Utilization of dry redgrass *Themeda triandra* (Forsk.) by the harvester termite *Hodotermes mossambicus* (Hagen) 37
Rekenaarsekerheid. Rekenaarsekerheid: navorsing en praktyk 124
Rhinoceros horn. The case for dehorning the black rhinoceros in Namibia 226
RIBBINK, A.J., *et al.* 236
RICHARDSON. D.M. and BOND, W.J. 429
Road surface. Inproving road surfaces is a drag 215
ROBINSON, F.P.A., *et al.* 205
ROSS, G.J.B. and RANDALL, R.M. 172
ROSSOUW, R.J., *et al.* 156
Rotaviruses. Isolates of group A human rotaviruses in South Africa which do not belong to subgroup I or II 515
ROVATI, C., *et al.* 41
Rubber. Recent research in South Africa on rubber production in guayule: I. Biosynthesis and associated topics 132
Rubber. Recent research in South Africa on rubber production in guayule: II. Seed production and establishment 135
Rubiaceae. Non-pathological bacterial symbiosis in *Pachystigma* and *Fadogia* (Rubiaceae): its evolutionary significance and possible involvement in the aetiology of gousiekte in domestic ruminants 93
RUBIDGE, B.S. and HOPSON, J.A. 43
RUBINI, P.G., *et al.* 41
Rural areas. The socio-ecological impact of development schemes in the 'homelands' of South Africa 440
RUST, I.C. 299
RUST, I.C. and REDDERING, J.S.V. 425
RYAN, P.G. and MOLONEY, C.L. 450
RYBICKI, E. 182

S

Saldanha Bay: A decade of change in Saldanha Bay: natural or anthropogenic? 454
Salinity. Prawns, salinities and lake levels in St Lucia, northern Natal 252
SALTER, L.F., *et al.* 279
SAMUELSON, L. 78, 129, 194, 237, 478
SATHAR, M.A., *et al.* 139
SCHALKWYK, A. VAN See VAN SCHALKWYK, A. ....
Schistosomal infection. Immunoregulatory changes in single and combined, mild to moderate schistosomal infections in black children living in the Durban area 493
SCHLEYER, M. and RAMM, A.E.L. 228
SCHOLES, R.J. 350
SCHOLTZ, A., *et al.* 302
SCHÖNENBERGER, H. and WITTMANN, G.T.W. 518
SCHULZE, R.E. 373
SCHÜTTE, R., *et al.* 403
Scopolamine. Antagonism of a novel cholinotropic property of lithium by scopolamine: a cyclic GMP hypothesis 265
SCOTNEY, D.M. and DIJKHUIS, F.J. 395
SCOTT, K.M.F. 235
SCOTT, L. 464
SCOTT, L. and COOREMANS, B. 156
SCOTT L. *et al.* 302
SCOTT, P.A. and MANLEY, L. 484
SCOURFIELD, M.W.J., *et al.* 279
Sea-level rise. Planning and legal responses to sea-level rise in South Africa 294
Sea surface temperatures. Temporal variability of sea surface temperatures around southern Africa: a possible forcing mechanism for 18-year rainfall oscillation? 243
Seed production. Seed production in rangelands of the southern Karoo 231
Serum transferrin. The non-reductive removal of iron from human serum N-terminal monoferric transferrin by pyrophosphate 21
SHACKLETON, L. 278
SHANNON, L.V., *et al.* 281, 330, 356
SHILLINGTON, F.A. and WALKER, N.D. 382
Shrublands. Vegetation change in a semi-arid succulent dwarf shrubland in the eastern Cape, South Africa 392
SIEGFRIED, W.R., *et al.* 281, 330
SIMJEE, A.E., *et al.* 139
SMITH, M., *et al.* 86
SMITH, P.D., *et al.* 192
Soil acidification. Acidification of the pedosphere 403
Soil fertility. Changes in the fertility status of South African soils 395
SOMMERS, De K., *et al.* 28
South-east Atlantic. Environmental events within the south-east Atlantic (1906–1985) identified by analysis of sea surface temperature and wind data 470
South Indian Ocean Province Islands. Possible effects of Quaternary climatic change on the composition of insect communities of the South Indian Ocean Province Islands 386
South West Cape. Monitoring gradual change in areas of high mesoscale variability 467
SOWMAN, M.R., *et al.* 294
Space-time analysis. Methods of space-time analysis applied to meteorological data 354
SPARGO, P.E. 8
Sparteine. Polymorphism in sparteine oxidation in the Barakwena (Kwengo) of southern Africa 28
Spiders. Spiders wheel to escape 151
SPOELSTRA, B. 15
Stack height. Effect of stack height on ground-level concentrations of sulpher dioxide on the eastern Transvaal highveld 82
STADEN, J. VAN See VAN STADEN, J. ....
STADLER, L.G. DE See DE STADLER, L.G. ....
Stainless steel. Stainless steel's coatings of many colours 215
STEELE, A.D., *et al.* 515
STEYN, M.E., *et al.* 145
Stiff equations. A rational basis for stiff problems 263
STOLZ, A.C., *et al.* 209
STRAKER, C.J., *et al.* 118
Stroke. Stroke and heart attack: one disease or two? 79
STRYDOM, H.J., *et al.* 205
STRYDOM, N. 65
Sulphur dioxide pollution. Effect of stack height on ground-level concentrations of sulphur dioxide on the eastern Transvaal highveld 82
SWART, J. 238

T

TALJAARD, J.J.F., *et al.* 265
TALMA, A.S., *et al.* 147, 302
TAUNTON-CLARK, J. 470

TAUNTON-CLARK, J. and HUTCHINGS, L. 467
TAYLOR, P.J., *et al.* 256
TAYLOR, R.T., *et al.* 252
Terrestrial ecosystems. Change in nature and the nature of change: Interactions between terrestrial ecosystems and the atmosphere 350
Terrestrial molluscs. Terrestrial molluscs and archaeological stratigraphy: a cautionary tale 204
Tertiary education. How many universities? 128
THORP, J.A. LEE- See LEE-THORP, J.A. ....
Tin artifact. A radiocarbon date on a tin artifact from Rooiberg 63
TOSEN, G.R. and TURNER, C.R. 82
Trewaras, Ethelwynn. Ethelwynn Trewaras: a continuing inspiration to scientists 236
TULLMIN, M.A.A., *et al.* 205
TURNER, C.R. and TOSEN, G.R. 82
TURNER, M.L., *et al.* 192
TYSON, P.D. 318

U

Ultrasonic testing. Local capabilities in non-destructive testing 170
UNDERHILL, L.G., *et al.* 330
University education. Teaching and learning in science at university 235
University physics. University physics discussed at symposium 15

V

VAN BERS, N.L., *et al.* 93
VAN BILJON, P.L. and HEWITT, P.H. 37
VAN DER MERWE, C.F., *et al.* 93
VAN DER WALT, B.J., *et al.* 199
VAN DER WESTHUIZEN, A.J., *et al.* 152
VAN DYK, D., *et al.* 256
VAN SCHALKWYK, A., *et al.* 434
VAN STADEN, J. and GILLILAND, M.G. 132, 135
VAN WYK, A.E., *et al.* 93
VAN ZYL, J.M., *et al.* 199
VECCHI, M., *et al.* 41
Vegetation change. Vegetation change in a semi-arid succulent dwarf shrubland in the eastern Cape, South Africa 392
Vegetation change. What can we learn from extinctions and invasions about the effects of climate change? 429
VERHAGEN, B. Th. and ILLENBERGER, W.K. 311
VERSCHOOR, J.A., *et al.* 209
Vervet monkey. Gingival temperatures in the baboon and vervet monkey 86
VILJOEN, P.J., *et al.* 147
VILLACASTIN-HERRERO, C.A., *et al.* 330
Virus systematics. The classification of organisms at the edge of life or problems with virus systematics 182
VOGEL, C.H. 447
VOGEL, J.C., *et al.* 147, 302
VOLCHANSKY, A., *et al.* 86
Von Mueller, Ferdinand. Von Mueller correspondence 8

W

WALKER, N.D. and SHILLINGTON, F.A. 382
WALT, B.J. VAN DER See VAN DER WALT, B.J. ....
Water molecule. Another look at the water molecule 216
Water resource management. Research for the more efficient management of water resources 171
Water sampler. A simple method for collecting anoxic water samples to determine free sulphide 228
Wave groups. On long-period sea surface oscillations within coasted rock gullies 489
Wear resistance. Microstructure the key to wear resistance 475
Weather. The effect of oceanographic variability on South African weather and climate 382
WESTHUIZEN, A.J. VAN DER See VAN DER WESTHUIZEN, A.J. ....
WET, C. DE See DE WET, C. ....
WET, H. DE See DE WET, H. ....
Wheeling. Spiders wheel to escape 151
Wind monitoring. Monitoring gradual change in areas of high mesoscale variability 467
WINGFIELD, M.J. 60
WIT, M.J. DE See DE WIT, M.J. ....
WITTMANN, G.T.W. and SCHÖNENBERGER, H. 518
WOODHEAD, R., *et al.* 493
WYK, A.E. VAN See VAN WYK, A.E. ....

Z

Zeolites. Heterogeneous catalysis: Zeolite science at UCT 17
Zinc extraction. Manganese extraction secures zinc supply 483
Zululand coral reefs. Use of computer graphics software to produce a three-dimensional morphological and bathymetric model of a Zululand coral reef 130
ZUNCKEL, M., *et al.* 419
ZYL, J.M. VAN See VAN ZYL, J.M. ....